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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,022	01/21/2005	Akira Kuramori	ION2.012APC	1950
20995 7590 12/21/2007 KNOBBE MARTENS OLSON & BEAR LLP 2040 MAIN STREET FOURTEENTH FLOOR IRVINE, CA 92614			EXAMINER PANI, JOHN	
			ART UNIT 3736	PAPER NUMBER
			NOTIFICATION DATE 12/21/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/522,022

Applicant(s)

KURAMORI ET AL.

Examiner

John Pani

Art Unit

3736

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,7-9 and 11-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,5,7-9,12, and 14 is/are rejected.
- 7) ☒ Claim(s) 3,11,13 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 10/30/07.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 1, 3, 5, 7, 9, 11, and 13-15 are objected to because of the following informalities:

In reference to Claim 1

In line 4 it is suggested to replace "the muscles" with --muscles--. In lines 4-5 it is suggested to replace "the jaws" with --jaws--. It is suggested to move, from lines 12-13, "wherein the stress judging means excludes from a target period for stress judgment a period of work activity comprising opening and closing the jaws" to directly follow "input means" in line 10.

In reference to Claim 3

In line 2 it is suggested to insert --of work activity--after "the period".

In reference to Claim 5

In line 3 it is suggested to replace "comprises" with --comprising--. In line 6 it is suggested to replace "the muscles" with --muscles--. In line 7 it is suggested to replace "the jaws" with --jaws--. It is suggested to move, from lines 17-18, "wherein the stress judging means excludes from a target period for stress judgement a period of work activity comprising opening and closing the jaws" to directly follow "input means" in line 15.

In reference to Claim 7

In line 3 it is suggested to insert --of work activity--after "the period".

In reference to Claim 9

In lines 2, 8, and 12 it is suggested to replace "step for" with --step off—in order to positively recite that the steps include the actions listed thereafter. In line 4 it is suggested to replace "the muscles" with --muscles—. In lines 4-5 it is suggested to replace "the jaws" with --jaws—. It is suggested to move, from lines 13-14, "wherein the stress judging means excludes from a target period for stress judgement a period of work activity comprising opening and closing the jaws" to directly follow "input means" in line 11.

In reference to Claim 11

In line 2 it is suggested to insert --of work activity—after "the period".

In reference to Claims 13-15

In line 2 it is suggested to insert --of work activity—after "the period". In line 3 it is suggested to replace "shooting" with --filming-- or --photographing--.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 5, 7, 8, and 14 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 5 is directed to nonstatutory descriptive material in the form of a "computer-executable program" which consists merely of process steps. See MPEP §2106.01. "When functional descriptive material is

recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized." It is suggested to insert --encoded on a computer-readable medium— after "product" in line 2 of claim 5 in order to overcome the rejection.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 4, 5, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by US Pat. No. 6,233,472 to Bennett et al. ("Bennett").

5. Bennett teaches:

In reference to Claim 1

A stress judging apparatus comprising a myoelectric potential signal input means (110, see col. 13 lines 1-55) that receives a myoelectric potential signal from a masseter muscle of a test subject (col. 13 lines 64-67) and that is capable of being used during a target work activity performed by exercise of muscles in an arm or leg of the test subject, not by exercise of the jaws of the subject (The type of target work activity is interpreted as an intended use which does not structurally distinguish the claimed apparatus from the invention disclosed by Bennett); and stress judging means ("Stress'

algorithm", which runs in computer **60**, see col. 13 line 56—col. 14 line 10) for judging stress of the test subject during the target work activity (The invention of Bennett judges stress while monitoring the patient) from an intensity or time-varying change (the EMG signal is an amplitude, or "intensity", and changes with time) the myoelectric potential inputted through the myoelectric potential signal means, wherein the stress judging means excludes from a target period for stress judgment a period of work activity comprising opening and closing the jaws (This would be true depending on the use of the invention of Bennett, for example, if the period of opening and closing the jaws occurs prior to the target period of stress judgment, the period of opening and closing jaws would be excluded from stress judgment); and a display (**80**) for displaying a result from the stress judging means.

In reference to Claim 4

Bennett teaches the apparatus of claim 1 (see above) and could be used in a vehicle steering operation performed by the test subject.

In reference to Claim 5

A stress-at work judging computer program product (see col. 13 lines 56-63) for causing a computer (**60**) to perform stress-at-work judgment, the computer program product comprising: a myoelectric potential signal input instruction (**60**, see col. 13 64-67) that receives a myoelectric potential signal from a masseter muscle of a test subject (col. 13 lines 64-67) and that is capable of being used during a target work activity performed by exercise of muscles in an arm or leg of the test subject, not by exercise of the jaws of the subject (The type of target work activity is interpreted as an intended use

which does not structurally distinguish the claimed apparatus from the invention disclosed by Bennett); and a stress judgment instruction ("Stress' algorithm", which runs in computer **60**, see col. 13 line 56—col. 14 line 10) for judging stress of the test subject during the target work activity (The invention of Bennett judges stress while monitoring the patient) from an intensity or time-varying change (the EMG signal is an amplitude, or "intensity", and changes with time) the myoelectric potential inputted through the myoelectric potential signal means, wherein the stress judging means excludes from a target period for stress judgment a period of work activity comprising opening and closing the jaws (This would be true depending on the use of the invention of Bennett, for example, if the period of opening and closing the jaws occurs prior to the target period of stress judgment, the period of opening and closing jaws would be excluded from stress judgment); and a display instruction (see col. 14 lines 2-4, **80**) for displaying a result from the stress judging means.

In reference to Claim 8

Bennett teaches the computer program product of claim 5 (see above) and could be used in a vehicle steering operation performed by the test subject.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over "Wearable and automotive systems for affect recognition from physiology" to Healey ("Healey") in view of Bennett.

In reference to Claim 9

Healey teaches a stress-at-work judging method comprising: a myoelectric potential input step of receiving a myoelectric potential signal from a muscle of a test subject during a target work activity, the target work activity performed by exercise of the muscles in an arm or leg of the test subject, not by exercise of the jaws of the test subject, the myoelectric potential signal being inputted through a myoelectric potential signal input means (see pg. 95); and a stress judging step for judging stress of the test subject during the target work activity from an intensity or time-varying change of the myoelectric potential signal (the EMG signal is an amplitude, or "intensity", and changes with time) inputted through the myoelectric potential signal input means (see pg. 122). However, Healey does not teach that the myoelectric potential is measured from the masseter muscle, or explicitly teach that the stress judging step excludes from a target period for stress judgment a period of work activity comprising opening and closing the jaws, or a display step for displaying a result of the stress judgment step.

There are work activities in which one would open and close the jaws, for example, talking prior to testing, which would be excluded from a target period for stress judgment due to their occurring prior to the recording of data. It would have been obvious to one having ordinary skill in the art to have included in the method of Healey,

a step of talking to the subject prior to beginning recording data in order to assure that the subject was ready to begin testing, etc.

Bennett teaches a method for monitoring anesthesia adequacy in which stress of the patient is determined with a computer algorithm (see col. 14 lines 1-10) that uses measured EMG data from facial muscles including the masseter muscles (see col. 13 lines 1-10), because the facial muscles, including the masseter muscles, are a good indicator of stress, as many people show "a more tortured facial expression" (col. 6 lines 43-45 of US Pat. No. 5,195,531 to Bennett, incorporated in US Pat. No. 6,233,472 by reference) when under stress. In addition, Bennett teaches displaying "Stress" index (col. 14 lines 5-9).

It would have been obvious to one having ordinary skill in the art at the time of the invention to have modified Healey by using the masseter muscle as the indicator of stress, because the masseter muscle, and the face in general, is a good indicator of stress, as taught by Bennett. It would have been further obvious to include a display step for displaying the result of the stress judgment, as taught by Bennett, so that the user or observer would be aware of as stress condition, as implied by Bennett.

In reference to Claim 12

Healey in view of Bennett teaches the method of claim 9 (see above) and further teaches that the target work activity is a vehicle steering operation performed by the test subject (see pg. 98).

Allowable Subject Matter

8. Claims 3, 11, and 13-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

9. Applicant's arguments with respect to claims 1, 4, 5, 8, 9, and 12 have been considered but are moot in view of the new ground(s) of rejection.

10. Regarding the Applicant's assertion that the Bennett and Healey references do not teach the stress judging means/instruction/step excluding from a target period for stress judgment a period of work activity comprising opening and closing the jaws, please see the above new rejections.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Pani whose telephone number is 571-270-1996. The examiner can normally be reached on Monday-Friday 7:30 am - 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on 571-272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

